CT2.301# - Cutting Unit Boundaries (09/2001)

Cutting Unit Boundary Designation Table

Cutting Unit	Paint Color	Designation
Unit 1	Orange	Ends of cutting unit boundaries are marked in orange double banded paint. The south boundary is delineated by FS road 40003.

CT2.352# – DESIGNATION BY SPECIES AND DIAMETER. (1/04)

Tree Designation Table

Payment Unit(s)	Designated Species 1/	More than Stump Diameter (inches) 2/	Less than Stump Diameter (inches) 2/
01	Lodgepole Live	4.0	6.9
01	Lodgepole Dead	4.0	99.9

CT2.355# - INDIVIDUAL TREES (CUT TREE MARKING). (9/01)

Cut Tree Marking Table

Cutting Unit	Paint Color
Unit 1	Blue band on 2/3 the circumference of the bole at eye level, with stump mark.

CT5.12# – USE OF ROADS BY PURCHASER. (1/03) Purchaser's use of existing roads identified on Sale Area Map by the following codes is prohibited or subject to restrictive limitations, unless agreed otherwise:

Code	Use Limitations
X	Hauling prohibited
R	Hauling restricted
P	Use prohibited
A	Public use restriction
W	Regulation waiver

Roads coded A will be signed by Forest Service to inform the public of use restrictions. Purchaser's use of roads coded R, A, or W shall be in accordance with the following restrictions:

Restricted Road List

Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
40003	Cape Horn Lake	Sale Boundary	FS Rd. 40158	R	Hauling is Restricted to week days only from 12:00 am Monday morning to 12:00 midnight Friday from June 30th through Labor Day. Hauling is prohibited on weekends and Federal Holidays from June 30th through Labor Day. Hauling is restricted during winter beginning December 1 through June 30th to reduce conflicts with snowmobile trail and for resource protection.
40158	Boy Scout Camp	FS Rd. 40003	FS Rd. 40008	R	See above restriction
40008	Beaver Creek	FS Rd. 40158	Highway 21	R	See above restriction
40203	Marsh Creek	Fs Rd. 40008	Highway 21	X	Hauling Prohibited

CT5.31# – ROAD MAINTENANCE REQUIREMENTS. (1/03) Purchaser shall maintain roads in accordance with the following Contract Road Maintenance Requirements Summary:

Contract Road Maintenance Requirements Summary

Road	Termini		Miles	Applicable Prehaul Road Maintenance Specifications									
	From	To		800	801	802	803	804					
40003	Sale Boundary	FS RD 40158	.6										
40158	FS Rd 40003	FS Rd 40008	.6										

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Road	Termini		Miles	Applicable During Haul Road Maintenance Specifications									
	From	To		800	801	802	803	804					
40003	Sale Boundary	FS RD 40158	.6										
40158	FS Rd 40003	FS Rd 40008	.6										

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Road	Termini		Miles	Applicable Post Haul Road Maintenance Specifications									
	From	To		800	801	802	803	804					
40003	Sale Boundary	FS RD 40158	.6	P	P	P	P	D					
40158	FS Rd 40003	FS Rd 40008	.6	P	P	P	P	D					

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Road Maintenance T-Specifications

for

Timber Sale Contracts

To be used with Timber Sale Contract Form 2400-6T, CT5.31#

No.	Specification Title
T-800	Definitions
T-801	Slide and Slump Repair
T-802	Ditch Cleaning
T-803	Surface Blading
T-804	Surface Repair
T-805	Drainage Structures
T-806	Dust Abatements
T-807	Roadway Vegetation
T-808	Miscellaneous Structures
T-809	Waterbars
T-810	Barriers
T-811	Surface Treatment

SPECIFICATIONS T-800 DEFINIFTIONS

Wherever the following terms or pronouns are used in Specifications T-801 through T-811, the intent and meaning shall be interpreted as follows:

800-1.1 – Agreement. Maintenance projects require a mutually acceptable method to resolve the problems which arise when incompatible situations arise between drawings and specifications and actual conditions on the ground to allow orderly and satisfactory progress of the maintenance.

Theses specifications have been developed in anticipation of those problem areas and have provided that such changes will be by Agreement.

It is intended that drawings and specifications will govern unless "on-the-ground" conditions warrant otherwise, when specifications call for "Agreement", "agreed", or "approval" such Agreement or approval shall be promptly confirmed in writing.

800-1.2 – Annual Road Maintenance Plan. A plan prepared by various users of one or several roads.
The plan is an Agreement on maintenance responsibilities to be performed for the coming year.

800-1.3 – Base Course. Material used to reinforce Subgrade or, as shown on drawings, placed on Subgrade to distribute wheel loads.

800-1.4 – Berm. Curb or dike constructed to prevent Roadway runoff water from discharging onto embankment slope.

800-1.5 – Borrow. Select Material taken from designated borrow sites.

800-1.6 – Crown, Inslope, and Outslope. The cross slope of the Traveled Way to aid in drainage and traffic maneuverability.

800-1.5 – Culverts. A conduit or passageway under a road, trail, or other obstruction. A culvert differs from a bridge in that it is usually entirely below the elevation of the Traveled Way.

800-1.8 – Drainage Dip. A dip in the Traveled Way which intercepts surface runoff and diverts the water off the Traveled Way. A Drainage Dip does not block the movement of traffic

800-1.9 – Drainage Structures. Manufactured structures which control the runoff of water from the Roadway including Inslope, overside drains, aprons, flumes, downdrains, downpipes, and the like,

800-1.10 – Dust Abatement Plan. A table which lists the road, dust palliative, application rates, and estimated number of subsequent applications.

800-1.11 – Lead-off Ditches. A ditch used to transmit water from Drainage Structure or Drainage Dip outlet to the natural drainage area.

800-1.12 – Material. Any substances specified for use in the performance of the work.

800-1.13 – Prehaul Maintenace. Road maintenance work which must be accomplished to maintain the roads to a satisfactory condition commensurate with the Purchaser's use, provided Purchaser's Operations do not damage improvements under B6.22 or National Forest resources and hauling can be done safely. This work will be shown in the Annual Road Maintenance Plan as provided in C5.31#.

800-1.14 – Roadbed. The portion of a road between the intersection of Subgrade and sideslopes, excluding that portion of the ditch below Subgrade.

800-1.15 – Road Maintenance Plan. A table which shows applicable road maintenance specifications to be performed by Purchaser or specific roads.

800-1.16 – Roadside. A general term denoting the area adjoining the outer edge of the Roadway.

800-1.17 – Roadway. The portion of a road within the limits of excavation and embankment.

800-1.18 – Shoulder. That portion of Roadway contiguous with Traveled Way for accommodation of stopped vehicles, for emergency use, and lateral support of base and Surface Course, if any.

800-1.19 – Slide. A concentrated deposit of Materials from above or on backslope extending onto the Traveled Way or Shoulders, whether caused by mass land movements or accumulated raveling.

800-1.20 – Slough. Material eroded from the backslope which partially or completely blocks the ditch, but does not encroach on the Traveled Way so as to block passage of traffic.

800-1.21 – Slump. A localized portion of the Roadbed which has slipped or otherwise become lower than that of the adjacent Roadbed and constitutes a hazard to traffic.

800-1.22 – Special Project Specifications. Specifications which detail conditions and requirements peculiar to the individual project.

800-1.23 – Subgrade. Top surface of Roadbed upon which Base Course or Surface Course is constructed. For roads without Base Course or Surface Course, that portion of Roadbed prepared as the finished wearing surface.

800-1.24 – Surface Course. The material placed on Base Course or Subgrade primarily to resist abrasion and the effects of climate. Surface Course may be referred to as surfacing.

800-1.25 – Surface Treatment Plan. A table which lists the roads and surface treatments to be applied.

800-1.26 – Traveled Way. The portion of Roadway, excluding Shoulders, used for the movement of vehicles.

800-1.27 – Turnouts. That portion of the Traveled Way constructed as additional width on single lane roads to allow for safe passing of vehicles.

800-1.28 – Water Source. A place designated on the Road Maintenance Map for acquiring water for road maintenance purposes.

800-1.29 – Waterbar. A dip in the Roadbed which intercepts surface runoff and diverts the water off the Roadway. A Waterbar is not designed to be traversable by logging trucks.

SPECIFICATION T-802 DITCH CLEANING

DESCRIPTION

1.1 Ditch cleaning is removing and disposing of all Slough Material from Roadway ditches to provide a free-draining waterway.

REQUIREMENTS

3.1 Ditch cleaning shall be repeated during the year as often as necessary to facilitate proper drainage.

3.2 All Slough Material or other debris which might obstruct water flow in the Roadway ditch shall be removed. Material removed from the ditch, if suitable, may be blended into existing native road surface or Shoulder or placed in designated Berms in conjunction with Surface Blading T-803 operations.

Material removed from ditches that is not by Agreement blended into existing roads or placed in Berms shall be loaded and hauled to the disposal site designated by the Forest Service.

3.3 Roadway backslope or Berm shall not be undercut.

SPECIFICATION T-804 SURFACING REPAIR

DESCRIPTION

1.1 Surfacing repair is repairing potholes or small soft areas in the Traveled Way. It includes area preparation and furnishing and placing all necessary Materials, and other work necessary to repair the surface.

MATERIALS

2.1 Material used in the repair of soft areas on aggregate or native surfaced roads may be acquired from approved commercial sources, designated Forest Service Borrow areas, and Borrow sources agreed to. The quality and quantity of the imported Material used in the repair will be limited to the needed to provide a stable Traveled Way for hauling and to minimize damage to the road and adjacent resources. The quantity of imported surface repair Material used in the appraisal estimate will be shown on Road Maintenance Plan. However, the magnitude of the work may vary depending on Purchaser's hauling schedule and ground conditions.

2.2 Materials used in the repair of bituminous pavements may be acquired from local commercial sources. If a mixing table is required, the location shall be approved by the Forest Service. The bituminous mixture to be used by the Purchaser shall be approved by the Forest Service. The Purchaser's share of the quantity of bituminous mixture used in the appraisal estimate will be shown on Road Maintenance Plan. However, Purchaser's share of the work may vary depending on Purchaser's hauling schedule, ground conditions, other traffic, etc.

REQUIREMENTS

3.1 Work under this specification shall be performed in a timely manner to reduce further deterioration of the Traveled Way.

3.2 Soft spots on aggregate or native surfaces shall be repaired by placing the imported Surface Course on top of the soft spot. Layers of imported Material shall be placed until a firm surface is produced.

3.3 Bituminous Pavement Repairs. The areas to receive bituminous pavement repairs will be marked on the road surface by the Forest Service just prior to Purchaser performing the work.

3.4 Potholes (deep patch). Surface Course and Base Course Materials shall be excavated to a depth necessary to reach firm, suitable Material. The minimum depth of excavation shall be 2 inches and the maximum depth of excavation shall be to the top of the Subgrade.

The edges of the prepared hole shall be extended to form a vertical face in unfractured asphalt surfacing. The prepared hold shall generally be circular or rectangular in shape, dry, and cleaned of all loose Material.

Prepared potholes shall be patched or barricaded immediately.

The faces of the prepared hole shall be tacked with slow-setting emulsified asphalt.

The bituminous mixture shall be placed in layers not exceeding depth of 2 inches. Each layer shall be compacted thoroughly with hand or mechanical tampers or rollers. Compaction shall not be done with equipment wheels.

Upon completion, the compacted patch in the pothole shall be flush, with a tolerance or approximately ¼ inch to ½ inch above the level of the adjacent pavement.

3.5 Skin Patches. Bituminous mixture shall be distributed uniformly with feathered edges in layers not to exceed 2 inches compacted depth. When multiple layers are ordered, joints shall be offset at least 6 inches between layers.

Each layer shall be completed by two passes with a 7.0 ton steel roller or comparable vibratory roller.

3.6 Asphalt Berm. Damaged segments of Berm shall be removed and the exposed ends beveled at approximately 45 degrees from vertical. The Berm foundation shall be cleared and patched as necessary. The foundation and joining surfaces shall be coated with slow-setting emulsified asphalt. Asphalt mix shall be placed and compacted to conform with the shape and alignment of the undamaged segment.

3.7 Disposal. All Materials removed from potholes, patches, and Berms shall be disposed of at disposal sites designated by the Forest Service.

SPECIFICATIONS T-805 DRAINAGE STRUCTURES

DESCRIPTION

1.1 This work consists of maintaining Drainage Structures and related items such as inlet and outlet channels, existing riprap, trash racks, and dropinlets.

MATERIALS

2.1 All materials used in the maintenance of Drainage Structures shall conform by type and specification to the Material in the structure being maintained.

REQUIREMENTS

3.1 Drainage Structures and related items shall be cleared of all foreign Material which had been deposited above the bottom of the structure and vegetative growth which interferes with the flow pattern. Material removed that cannot be incorporated into maintenance work shall be hauled to a disposal site designated by the Forest Service.

3.2 If outlet or inlet riprap was installed by Purchaser as a construction item or existed prior to Purchaser's haul, it shall be maintained in good condition including the replacement of riprap if necessary to previous line, grade, and cross-section.

3.3 Perform maintenance to insure the proper functioning of the head walls, aprons, inlet assemblies, overside drains, riprap, trash racks, and other facilities related to the Drainage Structure.

RO-CT5.34# - OBLITERATION OF TEMPORARY ROADS, SKID TRAILS AND LANDINGS. (3/02)
Unless otherwise agreed in writing, temporary roads, skid trails and landings associated with the cutting unit(s) listed in the following table shall be obliterated using the method described.

Cutting Unit(s)	Type of Facility	Closure Method
Unit 1	Landings	Obliterate by removing berms and redistribute 4-10 tons per acre of slash back across skid trail clearing. Slash will be evenly distributed and not to exceed 24 inches in height.
Unit 1	Skid Trails	Obliterate by removing berms, recontouring to slope and redistribute 4-10 tons per acre of slash back across skid trail clearing. Slash will be evenly distributed and not to exceed 24 inches in height.

RO-CT6.312# - SALE OPERATION RESTRICTIONS. (11/06) Unless otherwise agreed in writing, sale operations will be restricted as listed below:

Sale Operation Restriction Schedule

Payment Unit / Cutting Unit	Restriction	Purpose
Unit 1	Sale operations are prohibited during the period from 12:00 AM March 15, through 11:59 PM July 14.	Wildlife protection (Migratory Bird Treaty Act), road surface protection
Unit 1	Hauling is prohibited	Hauling is prohibited on weekends and federal holidays from June 30th through Labor Day to reduce conflicts with the public recreating in adjacent area.

RO-CT6.7# - SLASH TREATMENT. (4/03) Slash is defined as logs, tops, limbs, and other woody material, exclusive of stumps, which is created by the logging operation and remaining on the ground after logging. In areas where Purchaser-created slash is intermingled and inseparable from pre-existing slash, slash disposal requirements shall apply to the pre-existing slash as well as the Purchaser-created slash. Such areas are designated in the Purchaser Slash Responsibility Table herein.

Unless otherwise agreed in writing, Purchaser shall perform the following work described below and/or as shown on the Sale Area Map and/or Slash Disposal Map.

Forest Service and Purchaser shall jointly develop a schedule for completion of slash treatment on the various portions of the sale area.

Purchaser's Slash Responsibility Table

Description of Unit(s)	Type of Slash Disposal
Unit 1	#5 – Landing Cleanup #10 - Clean System Roads #13 – Limb and Top Removal

5. Landing Cleanup

A landing is considered a place where any logs or products are gathered for loading. Logs not meeting utilization standards accumulated at landings shall be (decked) or (returned to the cutting unit) as agreed to in writing by the Forest Service. All slash accumulated at landings shall be piled, unless it is agreed in writing that slash can be thrown back into an area that is planned to be broadcast burned.

Piles shall be reasonably compact and free of soil to facilitate burning. Piles will not be less than 4 feet in height. Piles shall be of a size and location which will not impair road use or result in damage to residual timber. Piles shall be located at least 10 feet from residual timber. Piles shall not be more than 20 feet lon

Landing debris along temporary roads within the cutting units may be piled in conjunction with temporary road construction slash. Landing piles shall be placed along the lower side of the road.

All objects which extend more than 4 feet in any direction from the windrow or pile profile will be cut off and returned to the windrow or pile

10. Clean System Roads

Purchaser shall dispose of all logging slash __1____ inch large end diameter and __3_____ feet in length which is created within the clearing limits of system roads. Slash shall be piled for later burning within the right-of-way clearing unless an alternate method of slash disposal is agreed to in writing. Piles shall be reasonably compact and free of soil to facilitate burning. Piles shall be of a size and location which will not impair road use. Piles shall be a minimum of twice their diameter from any residual timber.

(Piles can be made by machine or hand. Portions of the specifications for machine or hand piles can be used as needed under this specification).

13. Limb and Top Removal

Purchaser shall leave tops and limbs of felled trees attached to Included Timber and yard them to landings (within the entire cutting unit) as shown on the Sale Area and Slash Disposal Map.

Tops and limbs which are lost on the way to the landing site due to normal felling, skidding and/or yarding operations are not required to be yarded

RO-CT6.8# - MEASURING. (9/03) The estimated quantity of timber on Page 1 has been determined by standard procedures described in FSH 2409.12, Timber Cruising Handbook.

The following table describes the type of cruising method used to determine quantities:

Payment Unit/Cutting Unit	Cruising Method
All	Fixed-radius plot sampling – 1/50th acre plots, post and pole; and 3-P 7”dbh plus

Estimated quantities of timber subsequently included under BT2.13, BT2.14, BT2.31, BT2.32, BT2.33, BT2.34, BT2.35 or BT2.37 not previously measured will be determined using the standard cruise methods as described in FSH 2409.12, Timber Cruising Handbook, or, if attached, using the Additional Volume Calculation Table based on information generated from the timber sale cruise.